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See application file for complete search history.

- (56)
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- ABSTRACT**

- A 3D semiconductor integrated circuit device and a method of manufacturing the same are provided. An active pillar is formed on a semiconductor substrate, and an interlayer insulating layer is formed so that the active pillar is buried in the interlayer insulating layer. The interlayer insulating layer is etched to form a hole so that the active pillar and a peripheral region of the active pillar are exposed. An etching process is performed on the peripheral region of the active pillar exposed through the hole by a certain depth, and a space having the depth is provided between the active pillar and the interlayer insulating layer. A silicon material layer is formed to be buried in the space having the depth, and an ohmic contact layer is formed on the silicon material layer and the active pillar.

- 24 Claims, 7 Drawing Sheets**

